



Runway Utilization Report

Winter Peak Period 2022—2023
Prepared by David Van Quest

The runway utilization report shows operations filtered by wind speeds under four knots which are considered 'calm.' The calm-wind operations of winter 2016—2017 are shown to compare runway utilization before the tower was in place. During calm winds, pilots and air traffic controllers (ATC) have more options regarding runway selection, however calm winds alone do not equate to every runway being available. Each morning, ATC staff look at several factors including: current and forecasted weather conditions, surface winds, winds aloft, Sierra crest weather and scheduled IFR traffic to determine which runway(s) to use. Runway length also plays a factor in a pilot's decision, and some will choose the longest runway despite the winds based on their aircraft requirements or personal comfort.

The following page shows the data tables of operations by runway and aircraft type during calm winds during the winters of 2016—2017 and 2022—2023. The actual counts are provided along with the percentages which is the key purpose to analyzing runway utilization. Also for comparison is the relative difference in percentages which shows the change in runway use *percentages*. This is not to be mistaken for a change in actual operation counts which are better analyzed in other Truckee Tahoe Airport publications such as the quarterly Operations & Community Comment Tracking Charts.

The runway utilization report data shows that the majority of this winter's operations occurred on Runway 29 and that compared to the '16-'17 winter there was more use of Runway 2. Among aircraft types, Runway 2 is utilized more by lighter and smaller aircraft due to its shorter length. Jets almost exclusively depart Runway 29 because of the instrument departure procedure, and the 17% of arrivals on Runway 11 were mostly due to the instrument approach. Turboprops had a 13% increase in Runway 11 departures and this may largely be the result of the executive box hangars, built on the west side of the airfield in 2018, which enabled a short taxi. Piston aircraft had the largest change in runway use with departures decreasing 19% from Runway 29 and increasing 25% on Runway 2.

While the numbers show how each runway was used, and how they compare to 2016—2017, the numbers alone don't tell the whole story. For instance, the numbers don't show that jets arriving from the northeast and landing on Runway 29 are often told by Truckee Tower to fly to the Truck Scales then cross overhead the airfield to avoid overflying Glenshire. The numbers also don't show that pilots flying training laps on 29 may sometimes be offered an early left crosswind turn to avoid affecting Olympic Heights and Sierra Meadows. An ancillary benefit to having an air traffic control tower is assisting with noise abatement. If a pilot is unfamiliar with KTRK, the tower will brief them on the departure procedure just prior to clearing them for takeoff. While a tower can help with noise abatement and preferred runway suggestions, it is important to remember that the number one priority is safety.

Calm Wind Operations (0-3 knots)

Winter Peak Period

December 15—April 15

All Aircraft		2016—2017		
Runway	Arrivals	Departures	All	
RWY 11	8%	3%	5%	
RWY 2	3%	8%	5%	
RWY 20	7%	1%	4%	
RWY 29	68%	76%	72%	
Unknown	14%	12%	13%	

Operations: 4,281

2022—2023		
Arrivals	Departures	All
6%	7%	6%
7%	23%	15%
6%	3%	4%
74%	60%	67%
7%	8%	8%

Operations: 4,440

Change		
Arrivals	Departures	All
-2%	4%	1%
4%	14%	9%
-1%	1%	0%
6%	-15%	-5%
-7%	-4%	-5%

Jet		2016—2017		
Runway	Arrivals	Departures	All	
RWY 11	21%	3%	13%	
RWY 2	1%	2%	1%	
RWY 20	5%	1%	3%	
RWY 29	70%	84%	77%	
Unknown	3%	10%	6%	

Operations: 647

2022—2023		
Arrivals	Departures	All
17%	6%	12%
0%	0%	0%
5%	0%	2%
74%	94%	84%
4%	0%	2%

Operations: 580

Change		
Arrivals	Departures	All
-4%	3%	-1%
-1%	-2%	-1%
0%	-1%	-1%
4%	9%	7%
1%	-10%	-4%

Turboprop		2016—2017		
Runway	Arrivals	Departures	All	
RWY 11	6%	3%	4%	
RWY 2	1%	10%	5%	
RWY 20	8%	1%	4%	
RWY 29	75%	78%	76%	
Unknown	11%	8%	10%	

Operations: 1,205

2022—2023		
Arrivals	Departures	All
7%	16%	11%
1%	3%	2%
5%	2%	3%
82%	72%	77%
5%	7%	6%

Operations: 897

Change		
Arrivals	Departures	All
1%	13%	7%
0%	-7%	-3%
-3%	1%	-1%
8%	-6%	1%
-5%	-1%	-3%

Piston		2016—2017		
Runway	Arrivals	Departures	All	
RWY 11	4%	2%	3%	
RWY 2	3%	10%	6%	
RWY 20	7%	2%	4%	
RWY 29	65%	71%	68%	
Unknown	21%	15%	18%	

Operations: 2,026

2022—2023		
Arrivals	Departures	All
3%	4%	3%
10%	35%	22%
6%	3%	5%
75%	52%	64%
6%	5%	5%

Operations: 2,787

Change		
Arrivals	Departures	All
-1%	2%	0%
7%	25%	16%
-1%	2%	1%
10%	-19%	-4%
-15%	-10%	-13%